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Eddie E. Scott Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551			SIEFKI, SAMUEL P	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/788,558

Filing Date: February 26, 2004

Appellant(s): HAAS ET AL.

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Eddie E. Scott  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/12/08 appealing from the Office action  
mailed 10/30/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

## (7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **(8) Evidence Relied Upon**

5.648.047 Kardish et al. 7-1997

5,035,862 Dietze et al. 7-1991

Applicant's specification: page 12, regarding chemical heaters; page 22-23 regarding dryers and heaters being well known in the art.

## (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kardish et al. (USPN 5,648,047) in view of Dietze et al. (USPN 5,035,862) and in further view of Applicant's admitted prior art (page 22-23 of the instant specification).

Kardish teaches a hand-held device for rapid colorimetric detection of explosives, narcotics, and other chemicals which can be accurately operated by non-skilled personnel and perform numerous tests in a quick sequential manner without exposing a user to hazardous reagents and without exposing sensitive reagents to deteriorating environmental conditions, the device comprising (a) a housing for handling and using the device, the housing including a sampling area and a testing area; (b) a roll of substrate for sampling materials suspected as including the chemical; (b) a feeding reel being rotatably connected to the housing, the feeding reel being for accommodating the roll of substrate; (c) at least one container for accommodating at least one detecting reagent, the at least one detecting reagent is for the colorimetric detection of the

chemical; and (d) at least one dispensing mechanism for dispensing a predetermined volume of the at least one reagent onto the substrate at the testing area (abstract, see fig. 1, col. 5, lines 30- col. 6, lines 60). Kardish teaches the testing area can be made of paper, cloth (polyester material) or a synthetic membrane (col. 5, line 45). Each reagent container has individual dispensing mechanisms for delivering the reagent to the test area (col. 6, lines 8-35). Kardish employs two elastic containers 28a and 28b that are transparent (col. 6, lines 15). The word elastic means that the containers are flexible and are structurally capable of being squeeze. Kardish states, after the substrate is positioned at testing area 18, a predetermined volume, formed due to the flexibility of containers 28 and the capillary effect of tubes 32, an aliquot of reagent is deposited on the sample pad. This is due to the compression (squeeze) by dispensing mechanisms 30a and 30b (figure 1) on the flexible container to dispense reagent (col. 7, lines 33-45). The dispenser further comprises a check valve 41 at the end of the dispenser to prevent air from entering the containers.

Kardish does not teach providing a heater or dryer, or both employed under the sample area and a flat disk shaped sample pad.

Dietze teaches a heater that is placed in thermal contact with a test strip in order to achieve rapid and selective heating of individual test fields on the test strip (abstract). Further Dietze states it is frequently desirable to heat test fields to an elevated temperature during a reaction. This leads to an acceleration of the reaction and an increase in detection sensitivity (col. 1, lines 45-47). Therefore, it would have been obvious to one having an ordinary skill in the art at the time of the invention to modify

Kardish to employ a heater that is below and in thermal contact with the test strip in order to provide rapid and selective heating of the sample on the test strip. Regarding the chemical heater, see the instant application specification on page 12 regarding chemical heaters description. "This type of heater is well known in the art and need not be described here." It is well known in the art that adding heat to a reaction (sample and reagent) speeds up the reaction which is a desirable property to shorten the waiting time for the reaction product. Therefore, in view of Appellant's admitted prior art and Dietze, one of ordinary skill in the art at the time of the invention would modify Kardish to employ an electric or chemical heater to heat a reaction in order to speed up the reaction time and increase detection sensitivity. The heater of Dietze is a heating pad.

Regarding the dryer, it would have been obvious to one having an ordinary skill in the art at the time of the invention to modify Kardish to employ a dryer on the sample substrate in order to dry the reaction product so that a colorimetric determination can be made. It is well known in the art as admitted by the instant specification that dryers are employed for this purpose. The Appellant submits on page 22-23, dryer are well known in the art and need not be discussed here. The Appellant is referring to dryers and heaters for specifically drying sample when applied to the sample surface. The Examiner has provided proper motivation for why it would have been obvious to modify Kardish to employ a dryer to dry the reaction product so that a colorimetric determination can be made. This feature is routinely employed in test strips for rapid determination of colorimetric reactions. One of ordinary skill in the art would have recognized this feature and applied the dryer in the manner above. The Examiner notes

that limitations on the manner in which the dryer is used are not attributed patentable weight in claims directed to a device. The device only has to disclose a structure that is capable of performing the function that the claim limitations require.

Regarding claim 10, 12, 22 and 24 it would have been obvious to one having an ordinary skill in the art at the time of the invention to modify Kardish to employ a battery powered heater because the device is portable and would require an independent power source to provide energy to the heater. Batteries are well known in the art as a portable power supply in these types of devices.

Regarding claim 13 and the disk shaped sample pad. Such change in shape is not considered a novel patentable feature because this is simply a matter of choice, which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed shape of the sample pad was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). The disk shape of a sample pad provides no patentable distinction over the rectangular test pad configuration of Kardish. The rectangular and round sample pads are interchangeable equivalents.

Regarding claim 23 it is the Examiner position that a switch (power on/off) is inherently associated with a heater otherwise it would be on all the time or off and would not be able to be turned on or off, which would render a heater inoperable and useless. Dietze teaches alternating current flows through the coils 13b of the heater which clearly indicates a switch in electrical voltage (col. 3, lines 51-56). Therefore Dietze teaches a switch for controlling a heater.

**(10) Response to Argument**

Appellant argues, "There is no suggestion or motivation to combine the primary Kardish reference and the secondary Dietze reference." The Examiner has provided proper motivation to combine Kardish and Dietze. It is well known in the art that adding heat to a reaction (sample and reagent) speeds up the reaction which is a desirable property to shorten the waiting time for the reaction product. Heating further increases the detection sensitivity (col. 1, lines 45-47). Therefore, in view of Kardish in view of Dietze and Appellant's admitted prior art, one of ordinary skill in the art at the time of the invention would modify Kardish to employ an electric or chemical heater to heat a reaction in order to speed up the reaction time and increase detection sensitivity. Further, heating serves to reduce the time it takes for colorimetric reaction to take place which is a desired trait in biological testing methods.

Appellant argues, there is no teaching in either of the two references to combine the primary Kardish reference and the secondary Dietze reference to produce the inspection tester for testing for explosives defined by claim 1 and 13. The Examiner has provided a teaching as seen in Dietze col. 1, lines 45-47 to provide for heating the sample pad that contains the reagent and sample thereon in order to speed up reaction time and the Appellant's admitted prior art teaching of the dryer. This is a sound teaching that is relied on in chemical analyzers throughout the art and the Examiner has provided proper motivation to modify Kardish in view of Dietz and the Appellant's admitted prior art teaching to employ this heating and dryer device.

Appellant argues, Appellants' claimed element a flat disk sample pad would not work in the Kardish reference and would destroy the operability of the Kardish reference device. The Appellant is referring to the sample pad in roll form as provided by Kardish. The disk shape of a sample pad provides no patentable distinction over the rectangular test pad configuration of Kardish. Such change in shape is not considered a novel patentable feature because this is simply a matter of choice, which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed shape of the sample pad was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). The rectangular and round sample pads are interchangeable equivalents. Further in the Appeal Brief filed 3/12/08, the Appellant has not addressed the above arguments presented by the Examiner. The Appellant merely points out that Kardish employs a roll 22 of substrate 20 and a flat disk sample pad and states that the claimed element would not work in the Kardish reference and would destroy the operability of the reference.

Appellant states, "Under MPEP §2142, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings." The Examiner has shown suggestion, motivation in the references along with knowledge generally available to one of ordinary skill in the art. Appellant states, "It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir.

1991)." It is widely accepted in the art and as seen by Dietze that heating a reagent and sample accelerates the reaction and increases detection sensitivity (col. 1, lines 45-47). Further, the applicant admits that dryers are well known in the art and need not be discussed in depth in the instant application. The Appellant is referring to dryers and heaters for specifically drying sample when applied to the sample surface. The Examiner has provided proper motivation for why it would have been obvious to modify Kardish to employ a dryer to dry the reaction product so that a colorimetric determination can be made. This feature is routinely employed in test strips for rapid determination of colorimetric reactions. One of ordinary skill in the art would have recognized this feature and applied the dryer in the manner above. The Examiner notes that limitations on the manner in which the dryer is used are not attributed patentable weight in claims directed to a device. The device only has to disclose a structure that is capable of performing the function that the claim limitations requires.

Regarding the Declaration under 37 CFR 1.132, the Examiner has considered the evidence in view of the entire record as a whole but has come to the conclusion that the evidence of long felt need and commercial success in the art is not convincing. The prior art provided by the Examiner shows devices that are more than capable of performing quick on site explosive detection. Therefore the long felt need is already being met by the prior art of record. Further, the evidence submitted does not tie into the instant application other than to show that the instant device can be used to detect explosives like the prior art of record.

Regarding the secondary evidence provided by the Appellant. To be given substantial weight in the determination of obviousness or nonobviousness, evidence of secondary considerations must be relevant to the subject matter as claimed, and therefore the Examiner must determine whether there is a nexus between the merits of the claimed invention and the evidence of secondary considerations. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 305 n.42, 227 USPQ 657, 673-674 n. 42 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). Looking at the cited secondary references the Examiner finds no mention of the devices a sample pad that is round. Further the ELITE model EL100 shown in the secondary evidence shows a square test pad and only mentions the option of a heater being employed is a butane lighter or battery powered heater (page 3, Evidence 5.) Accordingly, the Examiner has found no nexus between the secondary evidence and the claimed invention.

Regarding the Appellant's arguments presented to the fact that the claimed invention is under a commercial licensed agreement. The mere establishment of a license agreement is insufficient as evidence to show commercial success. The Applicant has not provided any financial figures to show commercial success.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Samuel P Siefke/

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